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EDITORIAL ANALYSIS

Ten Million Hectares Under Weather: Farmland in the Age of Volatility

DOWN TO EARTH

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Ten Million Hectares Under Weather: Farmland in the Age of Volatility

Down to Earth 20 July 2026 GS1 GS3

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THE LIFT LINE

A farmer no longer fears only the flood or only the drought. In the new climate, the same season can deliver both, and the official numbers are stark: more than ten million hectares of cropland caught in the crossfire of the weather.

WHY THIS EDITORIAL MATTERS FOR YOUR EXAM

This editorial turns an abstract phrase, "climate-driven weather volatility", into a hard, examinable official figure. Over **10 million hectares** of farmland damaged by **hydro-meteorological disasters** is exactly the kind of specific, sourced data point that lifts a Mains answer above generalities and anchors a Prelims fact.

It also lets you connect physical geography (the monsoon), agriculture, disaster management and food security in a single, current case, which is precisely the cross-cutting integration examiners reward.

GS Paper 1: The Indian monsoon, its variability, and the geography of floods and droughts across regions.

GS Paper 3: Agriculture and cropping patterns, food security, and disaster management, including crop insurance and preparedness.

For **Prelims**, hold the specifics: official government data showing more than **10 million hectares** of agricultural land damaged by floods, dry spells and other **hydro-meteorological disasters** in recent years; the southwest monsoon running below the **Long Period Average (LPA)** in mid-July 2026; the **Pradhan Mantri Fasal Bima Yojana (PMFBY)** crop insurance scheme; and the **Disaster Management Act, 2005** with the **National Disaster Management Authority (NDMA)**.

For **Mains**, the sharp point is that the same monsoon season can now carry both flood and drought risk, so resilience, not just relief, must anchor agricultural policy.

BACKGROUND AND CONTEXT

The southwest monsoon still writes India's agricultural fortune. It delivers the bulk of annual rainfall, and a large share of cultivated land remains rain-fed, so any wobble in the season transmits straight into crop output, farm incomes and food prices. The India Meteorological Department measures each season against the **Long Period Average**, and in mid-July 2026 the monsoon was running **below the LPA**, a below-normal season that squeezes sowing and reservoir storage.

Against this backdrop, official government data revealed the accumulating toll: more than **10 million hectares** of agricultural land damaged in recent years by **hydro-meteorological disasters**, the family of weather-driven hazards that includes floods, flash floods, dry spells, droughts, hailstorms and cyclonic rain. The figure matters because it is not a projection or a model output; it is an official acknowledgement of how much cropland is now routinely exposed.

The deeper shift is **volatility**. Climate change is not simply making India wetter or drier; it is making the weather more erratic, concentrating rain into intense bursts that flood fields while stretching the gaps between them into dry spells that wilt crops. The result is that a single below-normal season, like 2026, can combine deficits in one region with destructive downpours in another.

THE CORE ARGUMENT / ISSUE

The central argument is that **rising weather volatility, not average rainfall alone, is the real threat to Indian agriculture**, and that the policy toolkit must therefore shift from post-disaster relief toward built-in resilience, insurance and preparedness.

The same season, two disasters

The old mental model separated the flood year from the drought year. That model is breaking. A below-normal monsoon can still deliver damaging floods where rain arrives in concentrated bursts, while leaving other districts parched. Managing this means preparing for both risks simultaneously, within one season.

From relief to resilience

Responding after the damage, with compensation and relief, treats the symptom. The ten-million-hectare figure argues for prevention: climate-resilient crop varieties, better drainage and water storage, and cropping calendars tuned to a more erratic monsoon.

Insurance that actually reaches the field

PMFBY exists precisely to cushion weather-driven crop loss, but its value depends on rapid, accurate assessment and timely payouts. When claims are slow or disputed, the safety net fails at the moment of need, and the farmer absorbs the shock.

ELEMENT	DETAIL	EXAM RELEVANCE
Damage figure	Over 10 million hectares of farmland	Official government data point
Hazard type	Hydro-meteorological disasters	Floods, dry spells, hail, cyclonic rain
2026 monsoon	Running below the LPA in mid-July	Below-normal season, sowing stress
Insurance	Pradhan Mantri Fasal Bima Yojana	Crop insurance, needs timely payout
Legal framework	Disaster Management Act, 2005, NDMA	Preparedness and mitigation mandate

HOW TO THINK ABOUT THIS (ANALYTICAL FRAME)

Use the **hazard-exposure-vulnerability frame** from disaster studies. Risk is not the hazard alone; it is the hazard multiplied by exposure (how much cropland lies in harm's way) and by vulnerability (how poorly it can cope). India cannot switch off the monsoon's volatility, the hazard, but it can shrink exposure through better land and water planning and reduce vulnerability through resilient crops, irrigation and insurance. This frame reframes the ten-million-hectare number from a lament into an agenda, moving an answer from "the weather is hurting farmers" to "here is how we cut the risk."

THE DIAGRAM IN WORDS

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Climate-driven weather volatility -> floods in bursts plus dry spells in gaps -> over 10 million hectares of farmland damaged -> crop loss, lower farm incomes, food-security stress -> respond with resilient crops, better insurance and disaster preparedness -> risk reduced within a volatile season
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WAY FORWARD

1. **Mainstream climate-resilient agriculture.** Promote drought and flood-tolerant varieties, staggered sowing and micro-irrigation so that fields can absorb both deficit and excess within the same season.
2. **Strengthen crop insurance delivery.** Make **PMFBY** assessment faster and more accurate through remote sensing and prompt payouts, so the safety net works when farmers actually need it.
3. **Invest in preparedness under the DM Act.** Use the **NDMA** framework to shift budgets from relief toward mitigation, early warning and district-level contingency plans keyed to the monsoon forecast.
4. **Build water and drainage infrastructure.** Expand storage, watershed development and field drainage so that intense bursts are captured rather than allowed to flood, and dry spells draw on stored water.

PYQ LINKAGE AND PRACTICE

UPSC has asked about the impact of climate change on Indian agriculture, about disaster management and the shift from relief to mitigation, and about the significance and variability of the monsoon. This editorial supplies a fresh, officially sourced figure and the flood-and-drought-in-one-season nuance to enrich those answers.

Practice question (Mains, GS3, 15 marks): "Rising weather volatility, more than falling average rainfall, is the emerging threat to Indian agriculture." In the light of recent data on farmland damaged by hydro-meteorological disasters, discuss the measures needed to build climate resilience in farming. (250 words)

Sources: Down To Earth

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